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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,358	09/19/2003	William Edward Starner	CVC-0004	8362

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EXAMINER	
FEELY, MICHAEL J	
ART UNIT	**PAPER NUMBER**
1712	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/666,358	STARNER ET AL.	
	Examiner	Art Unit	
	Michael J. Feely	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 December 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26,28,30-37 and 39-51* is/are pending in the application.

4a) Of the above claim(s) *1-19 and 44-51* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _____ is/are rejected.

7)☐ Claim(s) *20-26,28,30-37 and 39-43* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Pending Claims

Claims 1-26, 28, 30-37, and 39-51 are pending.

Claims 1-19 and 44-51 are withdrawn from consideration.

Claim 20-26, 28, 30-37, and 39-43 are under consideration.

Response to Amendment

1. The rejection of claims 20-26, 28, 30-37, and 39-43 under 35 U.S.C. 102(a) as being anticipated by Kamae et al. (WO 02/081540) has been overcome by amendment.

2. The rejection of claims 27, 29, and 38 under 35 U.S.C. 102(b) as being anticipated by Shimoda et al. (WO 02/066536) has been rendered moot by the cancellation of these claims.

3. The rejection of claims 20-31, 33-35, 37-39, and 41-43 under 35 U.S.C. 102(b) as being anticipated by Shimoda et al. (WO 02/066536) has been overcome by amendment.

Claim Rejections - 35 USC § 112

4. Claims 26 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 26 and 28 disclose that the claimed composition (polyepoxy + carboxylic acid + water) is substantially water-soluble. The specification clearly discloses that the combination of polyepoxy and carboxylic acid is substantially water-soluble (see paragraphs 0012-0013); however, it is unclear how the aqueous solution, itself, is soluble is water. The water in the claimed composition would not have had a solute/solvent relationship with additional water because they are one in the same. Appropriate correction is required.

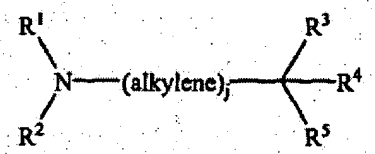
Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

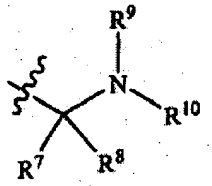
6. Claims 20-24, 26, 30-33, 35, 37, 39-41, and 43 rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al. (US Pat. No. 5,658,668).

Regarding claims 20-24, 26, 30-33, 35, 37, 39-41, and 43, Kobayashi et al. disclose: ***(20)*** a polyepoxy resin composition (Abstract; column 3, line 40 through column 4, line 59) comprising a compound of formula III:



III

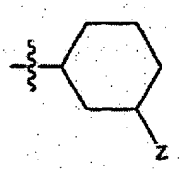
wherein R^1 and R^2 are each independently alkyl or –(alkylene)-epoxyethyl; R^3 is alkyl, aralkyl, or aryl, wherein said alkyl, aralkyl or aryl is optionally substituted with 0-5 Z; Z is:



R^7 and R^8 are each independently H, alkyl or aryl; R^9 are each independently alkyl or –(alkylene)-epoxyethyl; j is the integer 0 or 1; provided that at least two or R^1, R^2, R^9 and R^{10} are –(alkylene)epoxyethyl (column 4, line 60 through column 5, line 60); water (Abstract; column 3, line 40 through column 4, line 59); and a carboxylic acid, wherein the carboxylic acid is HCO_2H

or alkyl-CO_2H, said alkyl optionally substituted with *see claim for list* (column 8, line 64 through column 9, line 13);

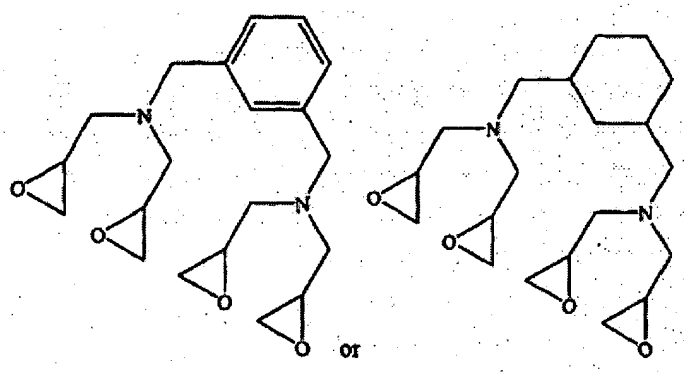
(21) wherein the ratio of carboxylic acid equivalents to amine equivalents of the compound of formula III is at least about 0.8 (column 3, lines 48-61; column 9, lines 4-13: *overlap of ranges*); ***(22)*** wherein the ratio of carboxylic acid equivalents to amine equivalents of the compound of formula III is of about 0.8 to about 5 (column 3, lines 48-61; column 9, lines 4-13: *overlap of ranges*); ***(30)*** wherein R^3 is:



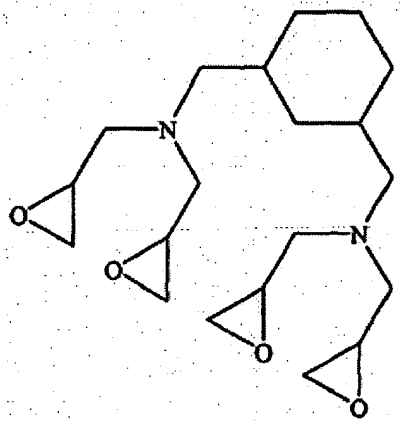
(column 4, line 60 through column 5, line 60); ***(23)*** wherein the ratio of carboxylic acid equivalents to amine equivalents of the compound of formula III is of about 0.8 to about 2 (column 3, lines 48-61; column 9, lines 4-13: *overlap of ranges*); and ***(24)*** wherein the ratio of carboxylic acid equivalents to amine equivalents of the compound of formula III is of about 0.8 to about 1.5 (column 3, lines 48-61; column 9, lines 4-13: *overlap of ranges*);

(26) wherein said *polyepoxy and carboxylic acid are* substantially water soluble (*inherent of the materials set forth in the reference – see MPEP 2112.01*);

(31) a coating produced from a mixture comprising: (a) the polyepoxy resin composition of claim 20; and (b) a curative (Abstract; column 3, line 40 through column 4, line 59); ***(32)*** wherein the carboxylic acid is acetic acid (column 8, line 64 through column 9, line 13); ***(33)*** wherein the compound of formula III of said polyepoxy resin is:

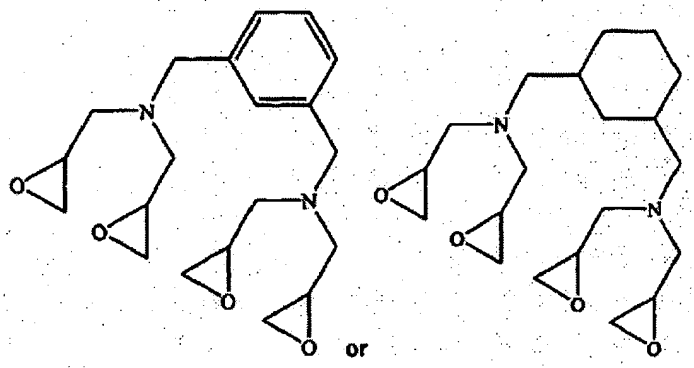


(column 4, line 60 through column 5, line 60); ***(35)*** wherein said formula III compound is:

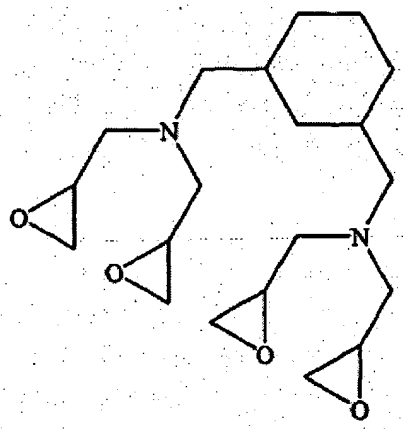


(column 4, line 60 through column 5, line 60);

(37) a kit for forming a coating produced from a mixture comprising the polyepoxy resin composition of claim 20 (*grouping of the claimed materials inherently satisfies the generically claimed "kit"*); ***(39)*** further comprising a curative (Abstract; column 3, line 40 through column 4, line 59); ***(40)*** wherein the carboxylic acid is acetic acid (column 8, line 64 through column 9, line 13); ***(41)*** wherein the compound of formula III is:



(column 4, line 60 through column 5, line 60); and ***(43)*** wherein said formula III compound is:



(column 4, line 60 through column 5, line 60).

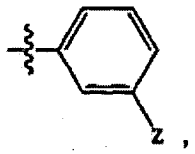
Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

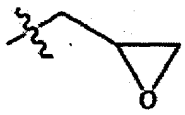
> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 25, 28, 34, 36, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (US Pat. No. 5,658,668) in view of Uramoto et al. (US Pat. No. 4,642,011) or Kutsuna et al. (US 2002/0120063).

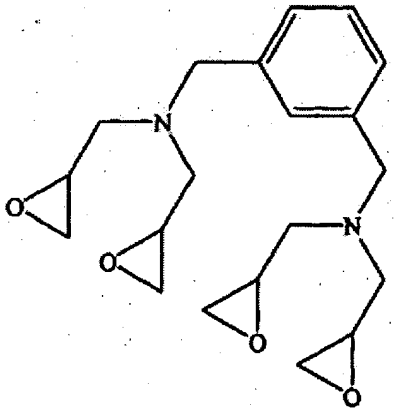
Regarding claims 25, 34, 36, and 42, Kobayashi et al. disclose the use of glycidylamine type epoxy resins *(see column 4, line 60 through column 5, line 60)*, and carboxylic acid ***(36)*** wherein the carboxylic acid is acetic acid (column 8, line 64 through column 9, line 13). However, they fail to explicitly disclose the epoxy resin of formula III: ***(25)*** wherein said aryl is:



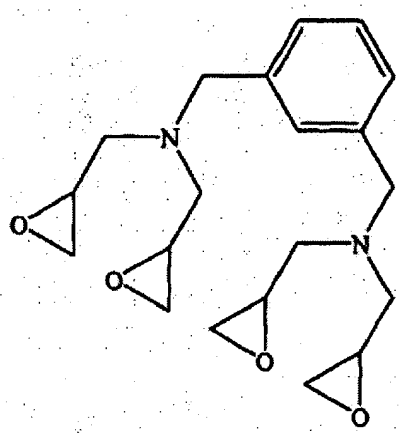
wherein R^7 and R^8 are each H, wherein Z is-$CH_2NR^9R^{10}$, and each of R^1, R^2, R^9, and R^{10} is:



; ***(34)*** wherein said formula III compound is:



; and ***(42)*** wherein said formula III compound is:



The epoxy resins used in Kobayashi are used to form corrosion-resistant films, wherein "Among the epoxy resins as the material of the inner layer (core), a glycidylamine type epoxy resin which has nitrogen atoms in the main skeleton of the resin is particularly suitable, since this type of epoxy resin exhibits markedly high resistance to thermal decomposition," *(see column 4, lines 60-64).* The specific materials set forth in column 5 are structurally similar to the instantly claimed materials in question.

Uramoto et al. disclose an anticorrosion composition featuring glycidylamine type epoxy resins *(see Abstract; column 2, line 65 through column 3, line 37).* Glycidylamine type epoxy resins featuring an aromatic ring and glycidylamine type epoxy resins featuring a cycloaliphatic ring are presented as interchangeable equivalents *(see column 3, lines 21-37).*

Kutsuna et al. disclose an epoxy resin composition having gas-barrier properties *(corrosion-preventative).* Preferable epoxy resins include glycidylamine type epoxy resin, such as *1,3-bis(aminomethyl) cyclohexane* and *tetraglycidyl methaxylylenediamine (see paragraphs 0032-0034).* Again, these are presented as interchangeable equivalents.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute *1,3-bis(aminomethyl) cyclohexane* with *tetraglycidyl*

methaxylylenediamine in the composition Kobayashi et al. because the teachings of Uramoto et al. and Kutsuna et al. demonstrate that these two materials are recognized in the art as equivalent glycidylamines for forming corrosion-resistant films – *see MPEP 2144.06.*

Further with respect to claim 28, these materials appear to be inherently water-soluble – *see MPEP 2112.01.*

Response to Arguments

9. Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. This application contains claims 1-19 and 44-51 drawn to an invention nonelected with traverse in Paper No. 20060109. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is 571-272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael J. Feely
Primary Examiner
Art Unit 1712

March 4, 2007

MICHAEL FEELY
PRIMARY EXAMINER